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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/727,663

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Hiroyuki Shibaki

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04/08/2008

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ALEXANDRIA, VA 22314

EXAMINER

KAU, STEVEN Y

ART UNIT

PAPER NUMBER

2625

NOTIFICATION DATE

DELIVERY MODE

04/08/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/727,663	SHIBAKI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	STEVEN KAU	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21, 24, 26-53, 56 and 58-65 is/are pending in the application.
- 4a) Of the above claim(s) 1-19, 28-51 and 60-65 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20, 21, 24, 26, 27, 52, 53, 56, 58 and 59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :2/4/08, 8/24/07, 7/30/07, 5/1/06, 12/5/03.

### **DETAILED ACTION**

1. This action is responsive to the Applicant's Amendment filed on January 3, 2008. Claims 22, 23, 25, 54, 55 and 57 have been cancelled; claims 1-21, 24, 26-53, 56, and 58-65 are currently pending; claims 1-19, 28-51, and 60-65 have been withdrawn, and claims 20-21, 24, 26-27, 52-53, 56 and 58-59 are to be examined in this office action.

### ***Response to Arguments***

2. This action is responsive to the following communication: an Amendment filed on January 3, 2008.

- Applicant's arguments, "Objection to IDS filing", pages 23-24, filed on January 3, 2008 with respect to IDS JP-9-27901, 3176052, 11-127340, and 9-186866 have been fully considered and are persuasive. The IDS objection has been withdrawn from the record.

Applicant's amendment filed on 01/03/2008 has been entered and made of record.

Applicant's arguments have been fully considered but they are not persuasive. Specifically in response to applicant's argument that "In this last respect, Kurita only discloses a zooming unit B (234) that magnifies the CMY signal and a zooming unit A (211) that magnifies the CMYK signal processed as to gamma correction (or URC) by 214. To whatever extent that Kihara teaches a viewfinder luminance signal with a wide

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16:9 aspect ratio (a well known ratio of viewing dimensions) and difference signals R-Y and B-Y of this same wide aspect ratio, these wide aspect ratios and the standard TV screen aspect ratio of 4:3 have nothing to do with ratios of color component signals as apparently misinterpreted at page 7, lines 4-8 of the outstanding Action as to col. 9, lines 61-68, and col. 10, lines 1-23, of Kihara" (emphasis added by applicant). **As applicant admitted that "Kurita discloses a zooming unit magnifying CMY signal" and "Kihara teaches a viewfinder luminance signal with a wide 16:9 aspect ratio", and these teaching and suggesting read into the claim. Lets review the newly amended claim 20, recites, "An image processing apparatus comprising: an input unit that inputs color image signals; and a magnification unit that magnifies the color image signals input ~~in such a manner that predetermined color information included in the color image signals before magnifying the color image signals are retained even after magnifying the color image signals~~ by the input unit, wherein the magnification unit includes, a first magnification unit that magnifies at least one component signal of the color image signals represented by the plurality of color component signals, and a second magnification unit that magnifies at least one further component signal of the color image signals, other than the at least one component signal of the color image signals magnified by the first magnification unit, based on a ratio between the at least one component signal of the color image signals to be magnified by the first magnification unit and the at least one further component signal of the color image signals to be magnified by the second magnification unit" (emphasis added by applicants).**

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Lets do a claim analysis - in this case, the applicants claim “...a first magnification unit that magnifies at least one component signal of the color image signals represented by the plurality of color component signals ... based on a ratio...” as their invention. And lets review the prior arts cited, “Kurita discloses a zooming unit magnifying CMY signal” and “Kihara teaches a viewfinder luminance signal with a wide 16:9 aspect ratio” (Remark, page 25, 01/03/08). In this example, “zooming unit magnifying CMY signal” reads the first part of claim limitation, and “a wide 16:9 aspect ratio” reads the second part of the limitation. Because “CMY signal” is also color component signal, and “aspect ratio” is a ratio. In addition, the examiner notices that, applicants disclose few types of ratios in the disclosure, for instance, “RG ratio calculation” and “RGB ratio” (Paragraph 0162 & 1063 of Pub US 2004/0165081). And therefore, “based on a ratio” is too broad in the claim. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The examiner also references the applicant to the claims rejection section below for the explanation on how the prior art references read on the amended claims.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following must be shown or the feature(s) canceled from the claim(s):

a) claim 24, line 6, "luminance signal magnification unit";

The disclosed drawings do not include what the integrated management apparatus comprising. Figs. 17 and 18 do not show every feature as claimed.

No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**5. Claims 20-21, 24, 26, 27, 52-53, 56 and 58-59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

With regarding to claim 20, limitation recites, " .... a second magnification unit that magnifies at least one further component signal of the color image signals, other

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than the at least one component signal of the color image signals magnified by the first magnification unit, based on a ratio ..." (emphasis added by applicants). Applicants failed to particularly point out what is ratio type. "based on a ratio" is too broad and one skilled in the art cannot figure out what is ratio to be based on so that ".... a second magnification unit that magnifies at least one further component signal of the color image signals, other than the at least one component signal of the color image signals magnified by the first magnification unit" can be processed.

Claims 21, 52 and 53 are rejected under 35 U.S.C. 112, second paragraph for the same reason discussed in the rejection of claim 20 in this section.

With regarding to claim 24, limitation recites, "....a luminance signal magnification unit that magnifies the luminance signal using magnification method that interpolates a luminance reference pixel area of wide extent[[:]] ...." (emphasis added by applicants). Applicants failed to particularly point out what is range of "wide extent" in the claim. One skilled in the art cannot figure out how much the coverage of extent is a wide extent of interpolates a luminance reference pixel area.

Claims 26-27, 56 and 58-59 are rejected under 35 U.S.C. 112, second paragraph for the same reason discussed in the rejection of claim 24 in this section.

The examiner will interpret "a ratio", and "wide extent" with a reasonable broadest interpretation in light of the disclosure.

See MPEP 2173.



***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 20-21 and 52-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurita (US 5,933,257) in view of Nakamura et al (Nakamura) (US 5,485,203)**

Regarding claim 20.

Kurita discloses An image processing apparatus (**e.g. apparatus of Fig. 1**) comprising: an input unit (**e.g. CCD 201 of Fig. 4a**) that inputs color image signals (**Fig. 4a, col 6, lines 35 through col 7, line 5**); and a magnification unit (**Zooming Unit 235 of Fig. 4a**) that magnifies the color image signals input ~~in such a manner that predetermined color information included in the color image signals before magnifying the color image signals are retained even after magnifying the color image signals~~ by the input unit (Figs. 4A-B, col 7, lines 37-43), wherein the magnification unit includes, a first magnification unit (zooming unit 235 of Fig. 4A) that magnifies at least one component signal of the color image signals represented by the plurality of color component signals (col 7, lines 37-43), and a second magnification unit (e.g. zooming unit 211 of Fig. 4B) that magnifies at least one further component signal of the color image signals (Figs. 4A-B, col 8, lines 3-24), other than the at least one

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component signal of the color image signals magnified by the first magnification unit  
**(e.g. CMYK data subjected to zooming process by zooming unit A211 is after gamma correction and therefore this data or signal is other than the color component signal magnified by zooming unit 235, col 8, lines 3-24).**

Kurita does not explicitly teach based on a ratio between the at least one component signal of the color image signals to be magnified by the first magnification unit and the at least one further component signal of the color image signals to be magnified by the second magnification unit.

Nakamura teaches based on a ratio **(e.g. color difference ratio, col 13, lines 45-50)** between the at least one component signal of the color image signals to be magnified by the first magnification unit (e.g. amplifiers 34A and 35A) and the at least one further component signal of the color image signals to be magnified by the second magnification unit (e.g. amplifiers 34B and 35B, col 16, lines 1-21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kurita to include based on a ratio between the at least one component signal of the color image signals to be magnified by the first magnification unit and the at least one further component signal of the color image signals to be magnified by the second magnification unit taught by Nakamura to identify and perform color misregistration correction to prevent image deterioration (col 2, lines 54-62).

Regarding claim 21.

Kurita does not explicitly teach wherein the predetermined color information includes a ratio of a plurality of color component signals.

Nakamura teaches wherein the predetermined color information includes a ratio of a plurality of color component signals (e.g. **“the ratios of color difference data read from the image memories”, one skilled in the art understands that the ratio is predetermined and therefore stored in the memories; col 13, lines 45-55).**

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Kurita to include wherein the predetermined color information includes a ratio of a plurality of color component signals taught by Nakamura, thus to help in determining the degree of color differences for color correction.

Regarding claim 52.

Claim 52 recites identical features as claim 20, except claim 52 is a method claim. Thus, arguments similar to that presented above for claim 20 are also equally applicable to claim 52.

Regarding claim 53.

Claim 53 recites identical features as claim 21, except claim 53 is a method claim. Thus, arguments similar to that presented above for claim 21 are also equally applicable to claim 53.

**8. Claims 24, 27, 56 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurita (US 5,933,257) in view of Nakamura et al (Nakamura)**

**(US 5,485,203) and further in view of Okada (US 5,511,137) and Miyakawa et al (Miyakawa) (US 4,887,252).**

Regarding claim 24.

Kurita 24. (Currently amended) An ~~the~~ image processing apparatus (e.g. **apparatus of Fig. 1**) ~~according to claim 23~~ comprising:  
an input unit that inputs color difference image signals and luminance signals (e.g. inputting color difference image signals include color components of R, G, and B image data and calculating luminance value; col 10 lines 50 through col 11, line 33); and a magnification unit (e.g. zooming unit 235 of Fig. 4A), wherein the color image signals includes a luminance signal and a color difference signal, and the magnification unit includes,  
a luminance signal magnification unit (e.g. **CMY color signal converted into Lab color space and dimension L is for luminance, Zooming Unit B 234 of Fig. 4b, col 7, lines 37-43**), and a color difference signal magnification unit that magnifies the color difference signals (**Zooming Unit B 234 of Fig. 4b, col 7, lines 37-43**) ~~in a manner that is different from magnification of the luminance signal magnification unit by the luminance signal~~ .

Kurita does not explicitly teach that using magnification method that interpolates a reference pixel area of wide extent[[]], and using a magnification method that interpolates a color reference pixel area that is narrower as compared with the reference pixel area, wherein predetermined color information included in the color

difference image signals before magnifying the color image signals is retained even after magnifying the color image difference signals.

Nakamura teaches wherein predetermined color information included in the color difference image signals (e.g. **“the ratios of color difference data read from the image memories”**, one skilled in the art understands that the ratio is **predetermined and therefore stored in the memories**; col 13, lines 45-55).

Okada teaches that magnifies the luminance signal using magnification method that interpolates a reference pixel area (e.g. original pixel center) of wide extent (e.g. **“generating a coordinate of a center of a new pixel for interpolating between the original pixel center according to a magnification rate”**, col 2, line 63 through col 3, line 3), and using a magnification method that interpolates a color reference pixel area that is narrower as compared with the reference pixel area (e.g. “generating a coordinate of a center of a new pixel for interpolating between the original pixel center according to a magnification rate”, one skilled in the art at the time the invention was made knows that there must be a comparison process comparing the original pixel area, or the reference pixel area to determine for performing magnification process, and this process can be applied to color component signals including luminance component signal; Figs. 4, 5 & 10, col 2, lines 63 through col 3, line 3 & col 4, lines 53 through col 5, line 33).

Miyakawa teaches wherein predetermined color information (**“predetermined color information”** is also taught by Nakamura discusses above in this section) included in the color difference image signals before magnifying the color image signals

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is retained even after magnifying the color image difference signals (e.g. "color carrier suppressing ratio of  $1/3f$  color carrier to luminance signal is kept under a predetermined level". One skilled in the art understands to keep the predetermined color information constant before and after magnification is to avoid introducing any undesirable noise to the image; col 17, lines 35-44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Okada to include wherein predetermined color information included in the color difference image signals before magnifying the color image signals is retained even after magnifying the color image difference signals taught by Miyakawa and Nakamura to avoid introducing any undesirable noise to the image during magnification process; and finally to have modified Kurita to include using magnification method that interpolates a reference pixel area of wide extent[[:]], and using a magnification method that interpolates a color reference pixel area that is narrower as compared with the reference pixel area, wherein predetermined color information included in the color difference image signals before magnifying the color image signals is retained even after magnifying the color image difference signals taught by Okada combining with Miyakawa and Nakamura to smooth magnifications of oblique lines in the image (col 2, lines 39-43).

Regarding claim 56.

Claim 56 recites identical features as claim 24, except claim 56 is a method claim. Thus, arguments similar to that presented above for claim 24 are also equally applicable to claim 56.

Regarding claim 27.

Kurita discloses wherein ~~the~~ each magnification unit conducts a different ~~two~~ dimensional magnification setting ~~processings~~ processing in a longitudinal direction of an image and in a lateral direction of ~~[[an]] the image[[,]] respectively~~ **(e.g. Kurita discloses main-scanning and sub-scanning directions for image processing including zooming or magnification, Fig. 4b, col 8, lines 31-38).**

Regarding claim 59.

Claim 59 recites identical features as claim 27, except claim 59 is a method claim. Thus, arguments similar to that presented above for claim 27 are also equally applicable to claim 59.

**9. Claims 26 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurita (US 5,933,257) in view of Nakamura et al (Nakamura) (US 5,485,203) and further in view of Okada (US 5,511,137) and Miyakawa et al (Miyakawa) (US 4,887,252) as applied to claims 24 and 56, and further in view of Suino et al (Suino) (US 2004/0013310).**

Regarding claim 26.

Kurita discloses wherein the luminance signal magnification unit **(e.g. CMY color signal converted into Lab color space and dimension L is for luminance, Zooming Unit B 234 of Fig. 4b, col 7, lines 37-43);** and a magnification unit **(e.g. zooming unit 235 of Fig. 4A)** and the color difference signal magnification unit magnify corresponding signals **(e.g. Figs. 4A-B, col 7 line 37 through col 8, line 24)**

Kurita does not explicitly teach giving weight parameters to peripheral pixels in each corresponding reference pixel area, and the weight ~~parameter~~ parameters set by the luminance signal magnification unit are different from ~~that~~ the weight parameters set by the color difference signal magnification unit.

Suino teaches giving weight parameters to peripheral pixels in each corresponding reference pixel area, and the weight ~~parameter~~ parameters set by the luminance signal magnification unit are different from ~~that~~ the weight parameters set by the color difference signal magnification unit (Suino teaches and suggests that determining the weight of the low-pass filter at the target pixel location for Y and color difference components in Fig. 57, Para. 0285).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the combination of Kurita, Nakamura, Okada and Miyakawa to include the luminance signal magnification unit and the color difference signal magnification unit magnify corresponding signals by giving weight parameters to peripheral pixels, and the weight parameter set by the luminance signal magnification unit are different from that set by the color difference signal magnification unit taught by Suino. The motivation for doing so is to minimizing errors with respect to the direction of a tile boundary employed. Therefore, if the weight parameter for color difference components is the same as luminance signal component, then the output video image will be distorted and/or moiré artifact will be introduced, and therefore video image quality will become unstable (Para. 0246).

Regarding claim 58.



Claim 58 recites identical features as claim 26, except claim 58 is a method claim. Thus, arguments similar to that presented above for claim 26 are also equally applicable to claim 58.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Kau whose telephone number is 571-270-1120 and fax number is 571-270-2120. The examiner can normally be reached on Monday to Friday, from 8:30 am -5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/S Kau/  
Examiner, Art Unit 2625/  
3/27/2008

/Gabriel I Garcia/  
Acting SPE of Art Unit 2625